

COOPER LIGHTING - METALUX®

DESCRIPTION

The MB series is a functional and multi-purpose narrow profile fluorescent High-Bay that incorporates premium performance with durable construction. Designed for T8 fluorescent technology, the MB series offers both high performance and application versatility with three optical configurations for general and aisle applications.

Illumination solution in commercial, industrial and retail applications, MB series can be used in warehouses and retail store distribution centers.

Catalog #	Type
Project	
Comments	Date
Prepared by	

SPECIFICATION FEATURES

A ... Construction

Die formed channel from 20 gauge prime cold rolled steel. Numerous KOs for ease of installation. End plate quickly converts to snap-in channel connector for continuous row alignment. Push-in style lampholders snap in to installed tracks. Channel/wireway cover positively secured with mechanical fastener.

B ... Electrical*

Ballasts are Class "P" and are positively secured. Rotor-lock lampholders ensure positive lamp retention. Optional pre-wired factory installed multiple circuit plug-in connectors. UL/CUL listed. Suitable for damp locations.

C ... Finish

Multistage iron phosphate pretreatment ensures maximum bonding and rust inhibitor.

D ... Channel/Wireway Cover

Heavy gauge prime cold rolled steel. Tight fit for ease of maintenance.

E ... Reflector

Specular reflectors for precise light control minimum 95% total reflectivity. Three optical distribution patterns are available: Focus - SC less than .9 Task - .9 less than or equal to SC less than 1.2 Normal - 1.2 less than or equal to SC less than or equal to 1.4

F ... Mounting

Suspension is convenient and flexible with the SS Aircraft Cable "Y" Toggle Mounting Kits. Adjustment for luminaire mounting height is provided at luminaire rather than structure. Order a rigid exterior connector/coupling with pre-punched holes to facilitate easy installation of coupled sections up to 32' long.

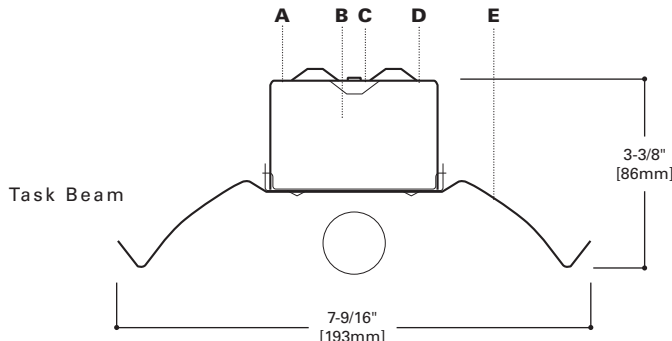
Option

Integral occupancy sensor available and provides from 600 sq. ft. up to 1250 sq. ft. of coverage in a maximum mounting height of 40'.

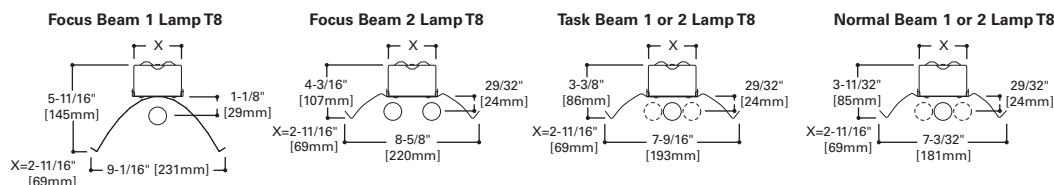


MB
132
232

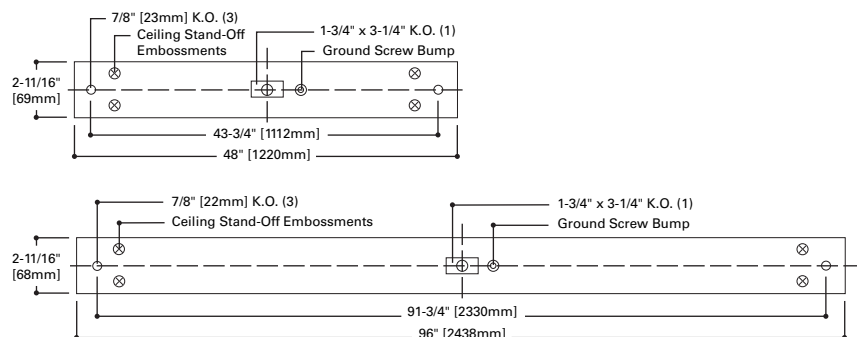
4' OR 8' MICROBAY*
1 OR 2 LAMP
T8 Lamp Technology
Task Beam
Focus Beam
Normal Beam
***Patent Pending**



LAMP CONFIGURATIONS



MOUNTING DATA



ENERGY DATA

Input Watts @ 120V:

Electronic Ballast

132 (28), 232 (58), 432 (109), 8T132 (58), 8T232 (109)

Electronic Ballast/Plus

132 (46), 232 (73), 432 (147), 8T132 (73), 8T232 (147)

ER Ballast

132 (36), 232 (57), 432 (112), 8T132 (57), 8T232 (112)

ER Ballast/Plus

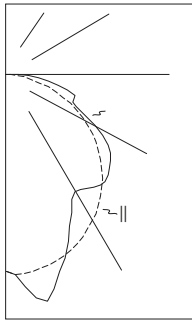
132 (46), 232 (74), 432 (144), 8T132 (74), 8T232 (144)

*Reference the lamp/ballast data in the Technical Section for specific lamp/ballast requirements.

LAMPS CONTAIN MERCURY. DISPOSE ACCORDING TO LOCAL, STATE OR FEDERAL LAWS

LINEAR DISCONNECT
Safe and convenient means of disconnecting power



**MB-132-NB/PLUS**

(1) Electronic Ballast

(1) 32WT8 lamp

2850 lumens

Spacing criterion:

(II) 1.2 x mounting

height, () 1.0 x

mounting height

Efficiency 94.1%

Test Report:

10267

LER =FL74

Yearly Cost of 1000

lumens, 3000 hrs at

.08 KWH = \$3.24

Candela

Angle	Along II	45°	Across
0	889	889	889
5	900	934	963
10	888	1002	1037
15	869	1008	921
20	843	904	803
25	809	803	687
30	767	687	613
35	719	589	628
40	665	535	653
45	605	535	645
50	540	534	607
55	470	504	560
60	396	454	457
65	316	384	343
70	235	272	324
75	154	223	280
80	78	174	190
85	19	89	98
90	2	11	14

Coefficients of Utilization

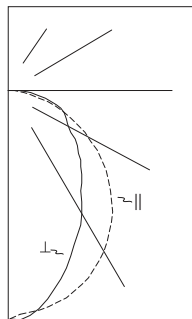
Effective floor cavity reflectance																20%												
rc	80%						70%						50%						30%			10%			0%			
rw	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10	50	30	10	0
RCR																												
0	112	112	112	112	109	109	109	109	105	105	105		100	100	100		96	96	96		94							
1	101	97	92	88	99	94	90	87	90	87	84		87	84	81		83	81	79		77							
2	92	84	77	71	89	82	76	70	78	73	69		75	71	67		72	69	65		63							
3	84	73	65	59	81	72	64	58	69	62	57		66	61	56		64	59	55		53							
4	76	65	56	50	74	63	55	49	61	54	49		59	53	48		57	51	47		45							
5	70	58	49	43	68	57	48	42	55	47	42		53	46	41		51	45	41		39							
6	65	52	43	37	63	51	43	37	49	42	37		48	41	36		46	40	36		34							
7	60	47	39	33	58	46	38	33	45	38	32		44	37	32		42	36	32		30							
8	56	43	35	29	55	42	35	29	41	34	29		40	34	29		39	33	29		27							
9	52	40	32	26	51	39	32	26	38	31	26		37	31	26		36	30	26		24							
10	49	37	29	24	48	36	29	24	35	28	24		34	28	24		33	28	24		22							

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	722	25.3	26.9
0-40	1133	39.8	42.3
0-60	2013	70.6	75.0
0-90	2680	94.0	99.9
0-180	2682	94.1	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	4400	3449	4020
55	4171	3787	4021
65	3741	3587	3012
75	2869	2868	3293
85	894	1932	1829

**MB-132-TB**

(1) Electronic Ballast

(1) 32WT8 lamp

2850 lumens

Spacing criterion:

(II) 1.2 x mounting

height, () 0.7 x

mounting height

Efficiency 95.1%

Test Report:

10266

LER =FL76

Yearly Cost of 1000

lumens, 3000 hrs at

.08 KWH = \$3.16

Candela

Angle	Along II	45°	Across
0	2427	2427	2427
5	2418	2349	2307
10	2386	2238	2269
15	2331	2223	2182
20	2253	2113	2067
25	2153	2015	1857
30	2034	1784	1559
35	1895	1616	1098
40	1738	1288	848
45	1563	897	548
50	1373	662	409
55	1169	416	192
60	955	275	11
65	734	90	2
70	517	4	2
75	317	2	2
80	156	1	1
85	45	1	1
90	0	0	0

Coefficients of Utilization

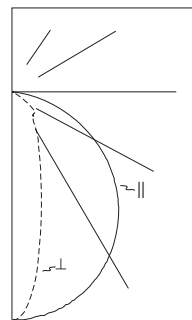
rc	Effective floor cavity reflectance												20%			0%			
	80%				70%				50%				30%				10%		
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50		30	10	
rw																			
RCR																			
0	113	113	113	113	111	111	111	111	106	106	106	101	101	101	97	97	97	95	
1	102	97	93	89	100	95	91	87	91	88	85	87	84	82	84	82	79	77	
2	93	84	77	71	90	82	76	70	79	73	69	76	71	67	73	69	66	63	
3	84	73	65	59	82	72	64	58	69	62	57	66	61	56	64	59	55	53	
4	77	65	56	49	74	63	55	49	61	54	48	59	53	48	57	51	47	45	
5	70	58	49	42	68	57	48	42	55	47	42	53	46	41	51	45	41	38	
6	65	52	43	37	63	51	43	37	49	42	36	48	41	36	46	40	36	34	
7	60	47	39	33	59	46	38	32	45	37	32	43	37	32	42	36	32	30	
8	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	26	
9	53	40	32	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24	
10	49	37	29	24	48	36	29	24	35	28	24	34	28	23	33	28	23	22	

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	700	24.6	25.8
0-40	1104	38.7	40.7
0-60	2001	70.2	73.8
0-90	2708	95.0	99.9
0-180	2711	95.1	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	4932	3249	3861
55	4467	3652	3961
65	3746	3663	3356
75	2639	2784	3378
85	844	1990	1869

**MB-132FB**

(1) Electronic Ballast

(1) 32WT8 lamp

2850 lumens

Spacing criterion:

(II) 1.2 x mounting

height, () 0.5 x

mounting height

Efficiency 96.8%

Test Report:

09363

LER =FL77

Yearly Cost of 1000

lumens, 3000 hrs at

.08 KWH = \$3.11

Candela

Angle	Along II	45°	Across
0	2558	2558	2558
5	2548	2427	2312
10	2513	2075	1735
15	2460	1619	1245
20	2378	1240	915
25	2275	947	688
30	2147	732	549
35	2004	583	410
40	1845	455	355
45	1669	337	340
50	1477	286	297
55	1261	259	146
60	1047	189	5
65	824	60	0
70	589	0	0
75	373	0	0
80	170	0	0
85	27	0	0
90	0	0	0

Coefficients of Utilization

Effective floor cavity reflectance																20%									
rc	80%												70%			50%			30%			10%			0%
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0	
RCR																									
0	115	115	115	115	113	113	113	113	108	108	108	103	103	103	99	99	99	97							
1	108	105	102	99	106	103	100	98	99	97	95	95	94	92	92	91	89	88							
2	101	96	91	87	99	94	89	86	91	87	84	88	85	82	85	82	80	78							
3	95	87	81	76	93	86	80	76	83	78	75	81	77	73	78	75	72	70							
4	88	79	73	68	86	78	72	67	76	71	66	74	69	66	72	68	65	63							
5	82	72	65	60	80	71	65	60	69	64	59	68	63	59	66	62	58	56							
6	77	66	59	54	75	65	59	54	64	58	53	62	57	53	61	56	53	51							
7	72	61	54	49	70	60	53	49	59	53	48	57	52	48	56	51	48	46							
8	67	56	49	44	66	55	48	44	54	48	43	53	47	43	52	47	43	41							
9	62	51	44	39	61	50	44	39	49	43	39	48	43	39	47	42	39	37							
10	58	47	40	36	57	46	40	35	46	40	35	45	39	35	44	39	35	34							

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	1251	43.9	45.3
0-40	1758	61.7	63.7
0-60	2535	88.9	91.9
0-90	2759	96.8	100.0
0-180	2759	96.8	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	45619	3312	3499
55	39272	3074	1852
65	30937	935	0
75	18360	0	0
85	2025	0	0

ORDERING INFORMATION

SAMPLE NUMBER: MB-132-NB-UNV-EB81-U

Tandem Blank = 4' Length 8T = 8' Length	Series MB = Micro-Bay	Number of Lamps (Not included) 1=1 Lamp 2=2 Lamps	Lamp Types 32=32WT8 (4') Lamp	Reflector FB =Focus Beam TB =Task Beam (Medium) NB =Normal Beam	Voltage UNV =Universal 120-277 Voltage UNC =Universal 347/480 Voltage ⁽⁴⁾	Options GL =Single Element Fuse GM =Double Element Fuse EL =Emergency Installed ⁽²⁾	Ballast Type⁽¹⁾ T8 Systems EB8 =T8 Electronic Instant Start. ⁽⁵⁾ Total Harmonic Distortion < 10% No. of Ballast 1 or 2 EB8 /PLUS = T8 Electronic Instant Start. ⁽⁵⁾ High Ballast Factor >1.15. Total Harmonic Distortion < 10% No. of Ballast 1 or 2 ER8 =T8 Electronic Program Rapid Start. ⁽⁵⁾ Total Harmonic Distortion < 10% No. of Ballast 1 or 2 ER8 /PLUS = T8 Electronic Program Start. ⁽⁵⁾ High Ballast Factor >1.15. Total Harmonic Distortion < 10% No. of Ballast 1 or 2 DIM =Consult Factory ⁽⁷⁾	Options PI/CPI =Plug-In (1, 2 or 3) C3 =3' Power Cord C6 =6' Power Cord PC3 =3' Power Cord & Plug (Specify Voltage) ⁽³⁾ PC6 =6' Power Cord & Plug (Specify Voltage) ⁽³⁾ Accessories (order separately) GRIPPLE-Y =Y Mounting Toggle, #2 Cable (Specify 10' or 30') (Row Mount) GRIPPLE-TOGGLE =Single Toggle, #2 Cable (Specify 10' or 30') (Stand-alone) MB-EXT-LONG-CONN-KIT-U =Rigid Connector Support for Continuous Channel Installation MS =Aisle Coverage Motion Sensor ^{(3) (6)} MSO =360° Coverage Motion Sensor ^{(3) (6)} MB-SENSOR-KIT-END/MT-U =Aisle Coverage Motion Sensor, End Mount Hardware, 120/277V MB-SENSOR-KIT-END/480V-U =Aisle Coverage Motion Sensor, End Mount Hardware, 480V	Packaging U =Unit Pack
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NOTES: ⁽¹⁾Products also available in non-US voltages and frequencies for international markets. ⁽²⁾Voltage to be specified with emergency ballast option. ⁽³⁾Voltage must be specified when ordered with plugs, motion sensors or emergency ballasts. ⁽⁴⁾2 lamp ballast configurations only in UNC versions. ⁽⁵⁾ER8 and EB8 ballast systems suitable for operation in ambient environments up to 50°C. ⁽⁶⁾Shipped separately. ⁽⁷⁾Dimming ballast must be specified at time of order.

PI OPTION ORDERING INFORMATION

Catalog Number Suffix	Number of Circuits	Circuit Wired To Ballast
PI 1 BLK	1	Black
PI 2 BLU	2	Blue
PI 2 BLK	2	Black
PI 3 RED	3	Red
PI 3 BLU	3	Blue
PI 3 BLK	3	Black

Catalog Numbering System

The PI System is available in sections up to 8' in length for continuous row wiring by simply plugging the sections together. Each PI section is factory wired to the ballast leads. Color coding of wires is as follows:

PI-1 = One Circuit - 2 Wires: one black, one white
PI-2 = Two Circuits - 3 Wires: one black, one blue, one white
PI-3 = Three Circuits - 4 wires: one black, one blue, one red, one white

When ordering the PI2/PI3 System it is necessary to specify the number of fixtures required for each circuit. Each circuit in fixture must be ordered as a separate line item, with a different hot wire color specified. All wiring to external feeds, using cord or cord & plug, are responsibility of installing licensed contractor. Cord and cord & plug sets must be ordered separately if PI option is chosen.

PI1 - Single Circuit Plug-In

SAMPLE NUMBER: P11BLK-WG

PI1 = Single Circuit BLK =Black Hot	NG = No Ground (ground provided by fixture body) WG = With Ground (separate ground wire in harness)
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PI3 - Three Circuit Plug-In

SAMPLE NUMBER: P13BLK-WG

PI3 = Three Circuit BLK =Black Hot BLU =Blue Hot RED =Red Hot Leave Blank =Single Neutral /WHT =White Neutral /GRY =Gray Neutral	Leave Blank =Single Neutral 2NEU =Two Neutrals	NG = No Ground (ground provided by fixture body) WG = With Ground (separate ground wire in harness)
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PI2 - Two Circuit Plug-In

SAMPLE NUMBER: P12BLK-WG

PI2 = Two Circuit BLK =Black Hot BLU =Blue Hot Leave Blank =Single Neutral /WHT =White Neutral /GRY =Gray Neutral	Leave Blank =Single Neutral 2NEU =Two Neutrals	NG = No Ground (ground provided by fixture body) WG = With Ground (separate ground wire in harness)
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SHIPPING INFORMATION

Catalog No.	Wt.
MB-132	6 lbs.